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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,885	08/29/2001	Masahiro Kawasaki	500.45062X00	5638

20457 7590 06/18/2003

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EXAMINER

ERDEM, FAZLI

ART UNIT PAPER NUMBER

2826

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/940,885

Applicant(s)

KAWASAKI ET AL.

Examiner

Fazli Erdem

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

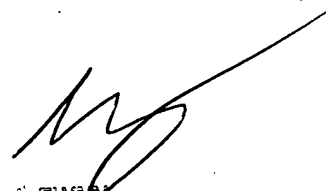
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-13 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
NATHAN J. FLYNN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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## DETAILED ACTION

### *Allowable Subject Matter*

1. Claim 9 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga (6,271,101) in view of Kuribayashi et al. (6,215,244) further in view of Shor et al. (5,569,932).

Regarding Claims 1-8, Fukunaga discloses a process for production of SOI substrate and process for production of semiconductor device where a process for producing an adhered SOI substrate without causing cracking and peeling of a single-crystal silicon thin film. The process consists of selectively forming a porous silicon layer in a single-crystal semiconductor substrate, adding hydrogen into the single-crystal semiconductor substrate to form a hydrogen-added layer, adhering the single crystal semiconductor substrate to a supporting substrate, separating the single-crystal semiconductor substrate at the hydrogen-added layer by thermal annealing, performing thermal annealing again to stabilize the adhering interface, and selectively removing the porous silicon layer to give single-crystal silicon layer divided into islands. Fukunaga fails to disclose the required laminate/porous structure and the passivation structure. However,

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Kuribayashi et al. disclose a stacked organic light emitting device with specific electrode arrangement where the required laminate/porous structure is disclosed. Furthermore, Shor et al. disclose a porous silicon carbide semiconductor device where the required passivation structure is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required laminate/porous structure and the passivation structure in Fukunaga as taught by Kuribayashi et al. and Shor et al. respectively in order to have a semiconductor device with better performance.

3. Claims 10 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang (6,140,164) in view of Kuribayashi et al. (6,215,244) further in view of Shor et al. (5,569,932) further in view of Sakaguchi et al. (6,054,363)

Regarding Claims 10 and 11, Zhang discloses a method of manufacturing a semiconductor device where a resist mask used for forming a region of aluminum is made small by ashing to form a new mask. Anodic oxidation is carried out with an anode of the region of aluminum to form porous anodic oxidation films. This way, mask can control the directions of openings of the porous anodic oxidation films. If the impurity ions are implanted using the porous anodic oxidation films as masks, the amount of impurity ions implanted into an active layer can be adjusted. Zhang fails to disclose the required laminate/porous structure, passivation structure, and the ion irradiating structure. However, Kuribayashi et al. disclose a stacked organic light emitting device with specific electrode arrangement where the required laminate/porous structure is disclosed. Furthermore, Shor et al.

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disclose a porous silicon carbide semiconductor device where the required passivation structure is disclosed. Finally, Sakaguchi et al. disclose a method of manufacturing semiconductor article where the required ion irradiating structure is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required laminate/porous structure, passivation structure, and the ion irradiating structure in Zhang as taught by Kuribayashi et al., Shor et al., and Sakaguchi et al. respectively in order to make a semiconductor device with better performance.

4. Claims 12 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Konuma et al. (5,747,355) in view of Kuribayashi et al. (6,215,244) further in view of Shor et al. (5,569,932) further in view of Sakaguchi et al. (6,054,363)

Regarding Claims 12 and 13, Konuma et al. disclose a method for producing a transistor using anodic oxidation where a method for producing a thin-film transistor in which the gate electrode is offset from the source and drain without detriment to the characteristics of the device or to manufacturing yield, and a structure for such a TFT are disclosed. Konuma et al. fail to disclose the required fails to disclose the required laminate/porous structure, passivation structure, and the ion irradiating structure. However, Kuribayashi et al. disclose a stacked organic light emitting device with specific electrode arrangement where the required laminate/porous structure is disclosed. Furthermore, Shor et al. disclose a porous silicon carbide semiconductor device where the required passivation structure is disclosed. Finally, Sakaguchi et al. disclose a method of manufacturing semiconductor article where the required ion irradiating structure is disclosed.

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It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required laminate/porous structure, passivation structure, and the ion irradiating structure in Konuma et al. as taught by Kuribayashi et al., Shor et al., and Sakaguchi et al. respectively in order to make a semiconductor device with better performance.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fazli Erdem whose telephone number is (703) 305-3868. The examiner can normally be reached on M - F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

FE

June 16, 2003